



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,771	09/10/2003	Eric Lacroix	33808F0343	4077
441	7590	06/29/2007	EXAMINER	
SMITH, GAMBRELL & RUSSELL 1850 M STREET, N.W., SUITE 800 WASHINGTON, DC 20036			NGUYEN, NGOC YEN M	
ART UNIT		PAPER NUMBER		
1754				
MAIL DATE		DELIVERY MODE		
06/29/2007		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/658,771	LACROIX ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ngoc-Yen M. Nguyen	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

- 1) Responsive to communication(s) filed on 10 September 2003.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

- 4) Claim(s) 8-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 8-23 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  - 1. Certified copies of the priority documents have been received.
  - 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

**DETAILED ACTION**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 23, there is no clear antecedent basis for "the catalytic fluorination", "the gas phase".

In claim 10, it is unclear if the limitation of "HF is first introduced" is for the HF in fluorination step or for the HF in the catalyst activation step; also, it is what "pure" compound is "at a temperature of less than 400°C".

In claims 12 and 21, there is no antecedent basis for "the contact time".

In claim 15, the limitation of "in the presence of an oxidizing agent, optionally oxygen or air" is indefinite because "oxygen or air" is an oxidizing agent, does the claim require an oxidizing agent in addition to "oxygen or air".

In claims 18-20, it is unclear if "the temperature" is for the fluorination step or the activation step.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1754

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-23 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Cheminal (5,523,500).

Cheminal '500 discloses a process for fluorination of halogenated hydrocarbons by gas phase catalysis (note column 1, lines 11-15).

As disclosed in "Fluorination Examples", HF and 1-chloro-2,2,2-trifluoroethane (F133a) are used as the reactants (note column 10, lines 61-67).

The catalyst is a catalyst based on nickel and chromium oxides (note claim 1 and Examples 1-5, 9, 11).

In Examples 13-15, the HF/F133a ratio is from 3.8 to 4.2, the contacting time is from 3.8 to 4.1 seconds, the temperature is 350°C, the pressure is at atmospheric pressure, the reaction is carried in the absence of oxygen (note column 11, lines 21-24 and Table 1).

In examples 16-17, the HF/F133a ratio is 5.1, the contacting time is from 19.6 to 19.7 seconds, the temperature is 350°C, the pressure is at 1.5 MPa, the reaction is carried in the presence of oxygen (note column 12, lines 15-20 and Table 2).

In Examples 18-20, the HF/F133a ratio is from 3.9 to 4.0, the contacting time is from 4.0 to 4.8 seconds, the temperature is 350°C, the pressure is at atmospheric pressure, the reaction is carried in the absence of oxygen (note column 12, lines 53-56 and Table 3). The catalyst can be regenerated by treatment under air at 300°C for 24 hours (note column 12, lines 57-61).

The process of Cheminal '500 anticipates the claimed process.

Alternatively, if there is any difference due to the product-by-process limitations, the process limitations in claims 1-10, 18 are noted. However, when the examiner has found a substantially similar product as in the applied prior art, the burden of proof is shifted to applicant to establish that their product is patentably distinct and not the examiner to show the same process of making. *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324.

Claims 8-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheminal '500.

Cheminal '500 discloses a process as stated in the above rejection.

For other halogenated hydrocarbon beside the exemplified 1-chloro-2,2,2-trifluoroethane (F133a), it would have been obvious to one of ordinary skill in the art to use other reactants in the process of Cheminal '500 as long as such reactants are halogenated hydrocarbons that can be fluorinated by HF.

Art Unit: 1754

For other values for fluorination temperature, contacting time, etc., it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the instantly claimed ranges through process optimization, since it has been held that there the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Boesch*, 205 USPQ 215.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc-Yen M. Nguyen whose telephone number is (571) 272-1356. The examiner is currently on a Part time schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1754

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Ngoc-Yen Nguyen*  
Ngoc-Yen M. Nguyen  
Primary Examiner  
Art Unit 1754

nmm  
June 25, 2007